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=> d his

     (FILE 'HOME' ENTERED AT 15:00:07 ON 27 FEB 2004)

     FILE 'MEDLINE' ENTERED AT 15:00:18 ON 27 FEB 2004
L1         14453 S PAPILLOMAVIRUS
L2         56324 S EXTRACT
L3            52 S L1 AND L2
L4         79707 S VACCINE
L5         34019 S PROPHYLACT?
L6             1 S L5 AND L3
L7             3 S L4 AND L3
                 E SCHLEGEL R/AU
L8           164 S E3
L9           109 S E4
L10           72 S L1 AND L8
L11            0 S L9 AND L1
L12            0 S L10 AND L2
L13            6 S L10 AND L4
L14            3 S L10 AND L5
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d 16

L6 ANSWER 1 OF 1 MEDLINE on STN
AN 90289157 MEDLINE
DN 90289157 PubMed ID: 2162579
TI Studies on vaccination against papillomaviruses: a comparison of purified virus, tumour **extract** and transformed cells in **prophylactic** vaccination.
AU Jarrett W F; O'Neil B W; Gaukroger J M; Laird H M; Smith K T; Campo M S
CS Department of Veterinary Pathology, University of Glasgow Veterinary School, Bearsden.
SO VETERINARY RECORD, (1990 May 5) 126 (18) 449-52.
Journal code: 0031164. ISSN: 0042-4900.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199007
ED Entered STN: 19900824
Last Updated on STN: 19900824
Entered Medline: 19900726

=> d 16 ab

L6 ANSWER 1 OF 1 MEDLINE on STN
AB Calves were vaccinated with two preparations made from one cutaneous fibropapilloma induced by bovine **papillomavirus** type 2 (BPV-2). One vaccine consisted of homogenised tumour; the other contained purified virus only. Both produced resistance to a heavy challenge infection of BPV-2. One calf in the vaccinated group developed a small tumour and rejected it earlier than the control calves. It would appear likely that the **prophylactic** immune response was induced by viral structural proteins only and that tumour-specific antigens are unnecessary. Bovine fibroblasts were transformed in vitro by BPV-2 and administered as a vaccine; immunity was not induced.

d l14 1-3

L14 ANSWER 1 OF 3 MEDLINE on STN
AN 2001437861 MEDLINE
DN 21376407 PubMed ID: 11483728
TI Immunization with a pentameric L1 fusion protein protects against **papillomavirus** infection.
AU Yuan H; Estes P A; Chen Y; Newsome J; Olcese V A; Garcea R L; **Schlegel R**
CS Department of Pathology, Georgetown University School of Medicine, Washington, DC 20007, USA.
NC R01CA37667 (NCI)
R01CA57994 (NCI)
SO JOURNAL OF VIROLOGY, (2001 Sep) 75 (17) 7848-53.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20010910
Last Updated on STN: 20010910
Entered Medline: 20010906

L14 ANSWER 2 OF 3 MEDLINE on STN
AN 96036704 MEDLINE
DN 96036704 PubMed ID: 7566866
TI Prospects for a vaccine against human **papillomavirus**.
AU Hines J F; Ghim S; **Schlegel R**; Jenson A B
CS Department of Obstetrics and Gynecology, Brooke Army Medical Center, San Antonio, Texas, USA.
SO OBSTETRICS AND GYNECOLOGY, (1995 Nov) 86 (5) 860-6. Ref: 30
Journal code: 0401101. ISSN: 0029-7844.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199511
ED Entered STN: 19951227
Last Updated on STN: 19970203
Entered Medline: 19951122

L14 ANSWER 3 OF 3 MEDLINE on STN
AN 95047752 MEDLINE
DN 95047752 PubMed ID: 7525426
TI Role of conformational epitopes expressed by human **papillomavirus** major capsid proteins in the serologic detection of infection and **prophylactic** vaccination.
CM Comment in: Gynecol Oncol. 1994 Oct;55(1):10-2
Comment in: Gynecol Oncol. 1994 Oct;55(1):10-2
AU Hines J F; Ghim S J; Christensen N D; Kreider J W; Barnes W A; **Schlegel R**; Jenson A B
CS Department of Obstetrics and Gynecology, Georgetown University Medical Center, Washington, DC 20007.
NC R01CA50812 (NCI)
R01CA57994 (NCI)
R01CA47622 (NCI)
SO GYNECOLOGIC ONCOLOGY, (1994 Oct) 55 (1) 13-20.
Journal code: 0365304. ISSN: 0090-8258.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199411
ED Entered STN: 19950110
Last Updated on STN: 20021217
Entered Medline: 19941128

=> d l14 1-3 ab

L14 ANSWER 1 OF 3 MEDLINE on STN
AB The **prophylactic papillomavirus** vaccines currently in clinical trials are composed of viral L1 capsid protein that is synthesized in eukaryotic expression systems and purified in the form of virus-like particles (VLPs). To evaluate whether VLPs are necessary for effective vaccination, we expressed the L1 protein as a glutathione S-transferase (GST) fusion protein in Escherichia coli and assayed its immunogenic activity in an established canine oral **papillomavirus** (COPV) model that previously validated the efficacy of VLP vaccines. The GST-COPV L1 fusion protein formed pentamers, but these capsomere-like structures did not assemble into VLPs. Despite the lack of VLP formation, the GST-COPV L1 protein retained its native conformation as determined by reactivity with conformation-specific anti-COPV antibodies. Most importantly, the GST-COPV L1 pentamers completely protected dogs from high-dose viral infection of their oral mucosa. L1 fusion proteins expressed in bacteria represent an economical alternative to VLPs as a human **papillomavirus** vaccine.

L14 ANSWER 2 OF 3 MEDLINE on STN
AB OBJECTIVE: To summarize existing data regarding the feasibility of developing strategies for **prophylactic** and therapeutic vaccination against human **papillomavirus** (HPV) infection. DATA SOURCES: We used the Medline data base and reference lists of articles to identify English-language papers that evaluate strategies for **prophylactic** and therapeutic vaccination against HPV infection. METHODS OF STUDY SELECTION: Our search uncovered several reports of systems that produce recombinant HPV major capsid proteins as antigens for biochemical, molecular, and immunologic studies and investigations that evaluate cell-mediated immune responses to HPV-induced, tumor-associated peptides. DATA EXTRACTION AND SYNTHESIS: Recombinant HPV major capsid proteins, which self-assemble into virus-like particles, are produced in quantity, mimic the conformation of native virions, react with neutralizing antibodies, and are type-specific. Human **papillomavirus** early viral peptides induce cytotoxic T lymphocyte responses that retard tumor progression and protect against tumor development after challenge in animal models. CONCLUSIONS: Recombinant **papillomavirus** virus-like particles are highly antigenic, protective in animal models, lack potentially carcinogenic viral DNA, and are, therefore, ideal candidates for a **prophylactic** vaccine against HPV infection. Immunization with HPV tumor peptides may be beneficial in tumor prevention, regression, and rejection. Vaccines against HPV infection can be important in reducing the incidence of cervical dysplasia and carcinoma worldwide, particularly in developing countries.

L14 ANSWER 3 OF 3 MEDLINE on STN
AB Human papillomaviruses (HPVs) cause a variety of cutaneous warts, mucosal condylomata, and dysplasias and are etiologic in cervical cancer. **Papillomavirus** (PV) conformational epitopes on the surface of virions are type-specific and are the target of neutralizing antibodies. In this study, we describe two methods of in vitro expression of HPV major

capsid (L1) proteins which mimicked conformational epitopes and demonstrate their type specificity and ability to react with neutralizing and/or conformation-dependent antibodies. The L1 open reading frames (ORFs) for HPV-1, 6, 11, and 16 were molecularly cloned into a SV 40 expression vector and the encoded gene products were expressed in mammalian (cos) cells. Similarly, the L1 ORFs for HPV-6, 11, 16, and 18 were molecularly cloned into recombinant baculovirus and the encoded gene products were expressed in insect (SF9) cells. The expressed L1 proteins reacted by immunofluorescence and immunoprecipitation with polyclonal and monoclonal antibodies generated against their corresponding native virions and by Western blotting with antibodies that recognized nonconformational epitopes of denatured virions. The recombinant L1 proteins expressed conformational epitopes in both cos and Sf9 cells that were type-specific and displayed neutralizing epitopes. The ability to express, purify, and qualitate the reactivity of recombinant L1 proteins will now permit the serologic analysis of host response to HPV infection and the development of **prophylactic** PV subunit vaccines.

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6485728 B2

L3: Entry 1 of 3 File: USPT Nov 26, 2002

US-PAT-NO: 6485728
DOCUMENT-IDENTIFIER: US 6485728 B2

TITLE: Formalin-Inactivated human papillomavirus L1 protein vaccine

DATE-ISSUED: November 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schlegel; C. Richard	Rockville	MD		
Jenson; A. Bennett	Rockville	MD		
Ghim; Shin-je	Washington	DC		

US-CL-CURRENT: 424/204.1; 424/184.1, 424/186.1, 424/199.1, 536/23.72

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. D

☐ 2. Document ID: US 5874089 A

L3: Entry 2 of 3 File: USPT Feb 23, 1999

US-PAT-NO: 5874089
DOCUMENT-IDENTIFIER: US 5874089 A
**** See image for Certificate of Correction ****

TITLE: Protecting against canine oral papillomavirus (copy)

DATE-ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schlegel; C. Richard	Rockville	MD		
Jenson; A. Bennett	Rockville	MD		
Ghim; Shin-je	Washington	DC		

US-CL-CURRENT: 424/204.1; 424/184.1, 424/186.1, 424/192.1, 424/199.1, 435/235.1, 435/320.1, 435/5, 435/69.1, 435/69.3, 536/23.72

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 3. Document ID: US 5576206 A

L3: Entry 3 of 3 File: USPT Nov 19, 1996

US-PAT-NO: 5576206
DOCUMENT-IDENTIFIER: US 5576206 A

TITLE: Human papilloma virus genes and their use in gene therapy

DATE-ISSUED: November 19, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schlegel; Richard	Rockville	MD		

US-CL-CURRENT: 435/371; 435/320.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

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Terms	Documents
Schlegel.in. and papillomavirus	3

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DATE: Friday, February 27, 2004

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		DB=USPT; PLUR=YES; OP=ADJ	
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☐	L7	papillomavirus and extract and vaccine	453
☐	L6	papillomavirus and extract.clm.	44
☐	L5	extract and papillomavirus.clm.	128
☐	L4	extract and papillomavirus	1162
☐	L3	Schlegel.in. and papillomavirus	3
☐	L2	Schlegel.in. and papilomavirus	0
☐	L1	Schlegel.in.	432

END OF SEARCH HISTORY